



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,991	10/17/2001	Bassam M. Hashem	71493-953/pw	4493

7590 06/27/2008
SMART & BIGGAR
P.O. Box 2999, Station D
900-55 Metcalfe Street
Ottawa, ON K1P 5Y6
CANADA

EXAMINER

HUYNH, NAM TRUNG

ART UNIT	PAPER NUMBER
----------	--------------

2617

MAIL DATE	DELIVERY MODE
-----------	---------------

06/27/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/977,991	Applicant(s) HASHEM ET AL.	
	Examiner NAM HUYNH	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This office action is in response to amendment filed on 2/29/2008. Of the previously presented claims 1-15 no amendments were made.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramos et al. (US 7,072,663) (hereinafter Ramos) in view of Shakhgildian (US 6,584,325).

Regarding claims 1, 8, and 9, Ramos discloses radio resource management (title). In the scope of the invention, Common Radio Resource Management (CRRM) (base station controller) conducts a cell prioritization algorithm to choose or assign the optimum target cell for connection in call setup, idle mode and in handovers/cell reselections (method for selecting at least one base station for communicating with a terminal) (column 4, lines 21-24). The prioritization algorithm orders the cells to assign the optimum target cell for connection in call setup, idle mode and in handovers/cell reselections based on a QoS requirement that takes into account throughput (downlink) for services (column 9, lines 15-29; column 12, lines 10-25) (selecting at least one optimum base station from the downlink candidate set).

Ramos discloses that the candidate target cell is chosen based upon parameters such as total load which includes information on the uplink, downlink, or both (storing a base station candidate cell list for the uplink/downlink) (column 4, lines 48-52; column 5, lines 51-55), but does not explicitly disclose storing an uplink candidate set listing, determining a predominant direction of traffic with respect to the terminal, and if the predominant direction of traffic is in an uplink direction, selecting at least one optimum base station from the uplink candidate set. Shakhgildian discloses a subscriber unit and method of cell selection for a cellular communication system. Shakhgildian teaches that known systems perform cell selection based on measurements of downlink power signals (abstract). In the scope of the invention, a subscriber unit receives uplink characteristics information from a target set of base stations (storing an uplink candidate set listing) (column 3, lines 1-7). If a short message data message is to be transmitted

Art Unit: 2617

from the subscriber unit (determining a predominant direction of traffic with respect to the terminal), then the base station with the best uplink performance will be selected (if the predominant direction of traffic is in an uplink direction, selecting at least one optimum base station from the uplink candidate set) (column 6, lines 6-16). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the prioritization algorithm of Ramos to distinguish candidate cells in the uplink and choose the optimum target cell based on a predominant direction of traffic, as taught by Shakhgildian, in order to optimize system resource when a mobile device sends data in an uplink direction. This modification provides a better balance between downlink and uplink quality criteria in cell selection resulting in a more efficient utilization and thus increased capacity of the cellular communication system.

Regarding claims 2, 4, 5, 10, and 12, Ramos discloses CRRM receives periodic or on demand information from the status of cell resources such as current traffic load of the cell, total load, and cell interference status, which are quality indicators (column 5, lines 15-65). This information is used to provide a revised candidate target cell list where the candidate cells are given a weighting or priority rating (column 7, lines 9-11). Therefore it is further obvious to one of ordinary skill in the art that based upon the received information, cells may be excluded or included in the candidate list.

Regarding claims 3, 11, and 13, Ramos teaches that handover thresholds/margins may be considered in cell capability (column 7, lines 1-5).

Regarding claims 6 and 14, it is inherent that the identity of the base station or cell is transmitted in the cell candidate list in the invention of Ramos.

Regarding claims 7 and 15, the CRRM of Ramos et al. takes into account the current traffic load of the cell (column 5, lines 15-18).

Response to Arguments

5. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAM HUYNH whose telephone number is (571)272-5970. The examiner can normally be reached on 8 a.m.-5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/
Supervisory Patent Examiner, Art Unit 2617

NTH
6/20/08